

Final
**Humboldt Bay Harbor, Recreation and Conservation District
Economic Development Committee**

Summary Report

May-October 2009



Compiled by Commissioner Patrick Higgins

June 2010

Acknowledgements

The Humboldt Bay Harbor, Recreation and Conservation District Commission would like to thank all the Economic Development Committee members who took time out of their busy lives to come together and help us understand what options are available for us to stimulate the economy of the bay. Presenters brought their passion and enthusiasm and explained practical yet exciting prospects for job development. Private business interests that typically are very guarded, in order to avoid providing information to competitors, were very candid and open in sharing their knowledge to the tremendous benefit of the group. The meetings were sometimes well attended by the public and their courtesy and goodwill added to a non-confrontational tone of forums that allowed a full exchange of ideas. Although Commissioner Higgins assembled this report, additional contributors and editors are Commissioner Mike Wilson, Chief Executive Officer David Hull, Ted Kuiper and Stephen Pepper of Humboldt Logistics.

Table of Contents

Cover	1
Acknowledgements	2
Table of Contents	3
Executive Summary	4
Background	5-6
Shipping/Harbor Infrastructure (May 2009)	6-8
Industrial and Light Industrial Development Options (June 2009)	9-11
Economic Development Through Expanded Tourism (July 2009)	11-16
Recreational Infrastructure Expansion and Economic Development (August 2009)	16-20
Restoration of Humboldt Bay: Current Economic and Long-Term Productivity Benefits (September 2009)	21-25
Fisheries & Aquaculture (October 2009)	25-29

Humboldt Bay Harbor, Recreation and Conservation District Economic Development Committee Summary May-October 2009

Executive Summary

The Humboldt Bay Harbor, Recreation and Conservation District Commission passed a motion in March 2009 to allow formation an Economic Development Committee in response to a proposal from Third Division Commissioner Mike Wilson. The committee was comprised of entrepreneurs, economic developers, government planners and interested citizens (Table 1). Meetings were a series of forums that explored a wide array of options for economic development around Humboldt Bay. Fifth Division Commissioner Patrick Higgins served as the Chair and convened the first meeting in May 2009 and the committee met monthly through October 2009.

The Harbor District has been an important player in economic activities around Humboldt Bay and the findings and recommendations discuss how various options and activities overlap with the current version of the District's *Strategic Plan* (2007-2011). Committee members stressed the importance of defining opportunities that have the greatest potential, identifying who the players are and why they are motivated, and also specifying what barriers they face in realizing their business plans. The ultimate objective is for the Harbor District (and other community entities) to work with the entrepreneurs to help overcome impediments. Some ideas that emerged during forums are already coming to fruition, but others may take more time to develop so the report breaks prospects into near-term and longer-term categories. Some business prospects emerged outside the committee and they are added below in appropriate sections.

All Economic Development Committee meetings were professionally recorded by the Humboldt Access project and all meetings can be reviewed on the Internet (Table 1). For those not having internet access, meetings can also be made available on DVD by Harbor District staff (443-0801). A full roster of committee members is available as Table 2.

Table 1. Topics, dates and internet access addresses to video recordings of Humboldt Bay Harbor, Recreation and Conservation District Economic Development Committee.

Topic	Date	Web Address
<i>Shipping/Harbor</i>	5/27/09	http://www.archive.org/details/AH-HarborDistrict_05-27-09
<i>Industry/Light Industry</i>	6/24/09	http://www.archive.org/details/AH-hdedc_06-24-09
<i>Tourism</i>	7/29/09	http://www.archive.org/details/AH-hdedc_7-29-09
<i>Recreation</i>	8/26/09	http://www.archive.org/details/AH-hdedc_8-26-09
<i>Restoration</i>	9/30/09	http://www.archive.org/details/AH-hdedc_9-30-09
<i>Fishing/Aquaculture</i>	10/28/09	http://www.archive.org/details/AH-hdedc_10-28-09

Table 2. Humboldt Bay Harbor, Recreation and Conservation District Economic Development Committee members and their affiliation.

Member	Affiliation
Patrick Higgins (Chair)	Humboldt Bay Harbor, Recreation and Conservation District
Mike Wilson	Humboldt Bay Harbor, Recreation and Conservation District
Dan Johnson	Danco Construction
Larry Oetker	Arcata Planning Department/Economic Development Corp.
Pete Oringer	Timber Heritage Association/Retired Businessman
Lew Litzke	Businessman/Humboldt Bay Eco-Hostel
Jacqueline Debitts	Humboldt County Economic Development Staff
Dave Schneider	Dock Owner, Owner Pacific Affiliates
Steven Pepper	Humboldt Logistics
Hawk Martin	Business Owner/Humboats
Leroy Zerlang	Madaket Operator/Humboldt Bay Maritime Museum
Larry Glass	Small Business Owner/Eureka City Council
Michael Buettner	Humboldt Bay Trails Trust
Dave Boughton	Union Representative
Randy Gans	Security National/Representative of Bay Side Land Owner
Todd Van Herpe	Humboldt Oyster Company (for Ted Kuiper)
J. Warren Hockaday	Eureka Chamber of Commerce
Alternates	
David Spreen	Spreen Enterprises (for Lew Litzky)
Ted Kuiper	Aquaculture Business Owner (Retired)(For Todd Van Herpe)
Marcia Taubner	Explore the North Coast (for Hawk Martin)
Don Leonard	Redwood Info (for Pete Oringer)
Greg Gardiner	101 Things (for J. Warren Hockaday)

Background

Every five years, the Harbor District reviews and updates its *Strategic Plan* with the most recent version completed in 2007. The plan captures input from the public and provides a mechanism for keeping track of shifts in interest with regard to the focus of the District. The Economic Development Committee is consistent with the intent of the *Strategic Plan* and carries out work that fills a gap defined therein. For example, one strategic objective within the plan states: “pursue economic development that is attainable, innovative and consistent with both best environmental practices and the Humboldt Bay Management Plan.” It also meets the general objective: “to expand and promote the economic infrastructure of Humboldt Bay and to develop opportunities for private entrepreneurship.” A major motive force for creating the committee overlaps with the *Strategic Plan* critical issue of “finding appropriate and productive uses for underutilized, historic industrial lands”, which include Harbor District properties like the Fields Landing Boat Yard and the Redwood Dock.

Additional overlap between the Economic Development Committee findings and recommendations and the *Strategic Plan* are apparent when examining potential initiatives listed:

- “Develop a coalition that will take on the task of designing an innovative, streamlined permitting process,
- Increase the effectiveness of coordination and cooperation with local port operators,
- Convene local interests to address potential impacts from the local implementation of the Marine Life Protection Act.”

The last revision of the *Strategic Plan* noted a “lack of comment on issues associated with economic development” and that “there was very little discussion of job development – or even of conserving the existing, living wage jobs” during its formulation. The Economic Development Committee helps fill that void and also deals with other issues raised in the *Strategic Plan*. These include potential development of an historical museum and train, meeting the increasing demand for recreational access and use of the bay, and the possible development of a mariculture park.

Forum I: Shipping/Harbor Infrastructure (May 27, 2009)

The Humboldt Bay Oyster Company put on a barbequed oyster feed prior to the first meeting of the Economic Development Committee and presenters and members were very appreciative. Committee Chair Patrick Higgins framed the committee’s work and members shared their ideas on what their expectations were for potential outcomes or products. Commissioner Higgins asked that the committee focus on relatively short-term prospects with realistic potential and some likelihood of near term capitalization. Committee members noted that large scale projects may need a decade or more of lead time and should not fall from consideration.

Commissioner Mike Wilson pointed to the need for change and innovation in his opening remarks. He pointed out that the Port of Humboldt Bay had twice the amount of waterfront industrial land as the Port of Oakland, with 1800 and 900 acres of zoned industrial lands and 4.5 and 4.9 miles of industrial waterfront, respectively. Mike expressed the hope that the committee’s work might be a catalyst for county government, other agencies and cities working together on changing plans and zoning in an articulated way around Humboldt Bay. We know we will not be a port of Oakland so let us not plan for that but instead for something that fits.

Current World Trade Trends and U.S. Port Competition (Commissioner Mike Wilson): This presentation was a summary of what Commissioner Mike Wilson had learned about world marine trade trends from attending a maritime conference several weeks prior. Scenarios for recovery ranged from two years, with strong recovery in 2010, to marine trade regaining 2006 levels again in 2016. Wilson also addressed the shifting port business from traditional shipping leaders, such as LA/Long Beach and Oakland, to northwest ports like Vancouver and Prince Rupert, British Columbia, and to east coast ports due to the expansion of the Panama Canal.

Marine Trade and Port of Humboldt Bay Opportunities and Redwood Dock Development (David Hull, Chief Executive Officer HBHRCD/Wilson Lacy, and HBHRCD Maritime Director): Harbor District Chief Executive Officer David Hull gave a history of Port development, including dredging of the harbor entrance. This action is integral to all shipping as well as the safety of other mariners and fisherman who must cross the treacherous bay bar to make a living.

He noted that in the 1980's and 1990's the need for deeper dredging was identified to keep the Port of Humboldt Bay competitive. He explained how the District's business prospects related to the framework provided by the Humboldt Bay Management Plan, the Harbor Revitalization Plan and the Redwood Dock Feasibility and Business Plan. Dave recapped the Harbor Districts more recent developments. The closure of the pulp mill in September 2008 and loss of business to the bay and revenue to the District was referenced, but he also recognized that the increases in the cost of diesel fuel were favoring conditions for development of short sea shipping.

Wilson Lacy explained shipping modes and options for Humboldt Bay and talked about potential business, such as shipping of power plant parts and the prospect for windmill and wave energy machines. He contrasted I-5 transport and short sea shipping and described how goods were more likely to travel on barges, particularly container on barge. He pointed out benefits of having both customs and an Enterprise Zone for fostering trade and noted the motivated private sector and labor force as additional positive factors. On the downside, Mr. Lacy talked about how the tangible prospects for business had declined but also noted how conditions may be improving. Both Dave Hull and Wilson Lacy noted that historically the major products for marine shipping have been timber based, and that a new major alternate industry shipping client had to date proved elusive.

Panel Discussion on Future Prospects for Trade in Humboldt Bay: Private business people from around Humboldt Bay addressed this topic.

Randy Gans (Security National): Security National purchased the Fairhaven Terminal because of future opportunities and no shipping options should be overlooked. Port congestion and constrained land bases are pinching other large ports and this leaves open potential that Humboldt Bay may still see some spill-over trade. Randy has tried to shape barge shipping options for Fairhaven clients, but it doesn't pencil because of the scale of trade. The business climate around Humboldt Bay is chilled by an expensive permit processes and he suggests that a more coordinated and streamlined approach is necessary. We have to welcome private investment, and responsible developers can not only improve infrastructure and create jobs but also maintain a healthy bay.

Woody Murphy: Woody has been a dock owner since 1986 and the business thrived in his early days of ownership with log exports (37 Mbf) to Asia and Europe. He has also done some log importing. Woody's observation was that we lost the international wood market because of regulatory climate related to the spotted owl. Despite the short term market conditions, the future is bright with some interest in lumber exports even now. He studied an abalone aquaculture facility for two years very seriously, but capitalization dried up due to the economic slow down. Woody talked about the expense and problems in permitting and the perspectives of various agencies. He had a dike failure and just getting it repaired took months to get a permit. Woody clearly stated that he was opposed to the Redwood Dock and said that there was insufficient business to justify its capitalization and that it would be unfair competition to independent operators. He noted that cruise ships were difficult to deal with and were not receptive to high dockage fees.

Dave Schneider: Mr. Schneider is the principal of Pacific Affiliates, a civil engineering consulting firm, and owner of the Schneider Dock near Schmidbauer Lumber on the Eureka waterfront. Dave talked about how he got a foot hold in the oil spill response business. He said that shipping prospects in the 1980's seemed bright so he invested \$5-10 million in his dock and

it now has the capacity to support at least 300 tons. Expense was also incurred for building upland and paving his storage yard, but he has had only about three ships a year. He talked about how actively the private sector has looked for business and the tough competition for the business that there is. He shies away from wood chips for that reason. Dave recalled a five year marketing effort conducted in coordination with the Harbor District, but large response was elusive. The bottom line is that there are not unlimited options. Dock maintenance is high and many docks lose money because they are infrequently in use. In closing, he noted his cooperative working relationship with Steven Pepper of Humboldt Logistics on short sea shipping.

Stephen Pepper: Humboldt Maritime Logistics (HML) is developing an intermodal short-sea shipping container on barge freight service, otherwise known as a marine highway. The marine highway service would operate between San Diego and Seattle and allow Humboldt businesses the means to ship a mix of commodities in containers to any West Coast port. Shipping destinations could include other U.S. market destinations via eastbound rail connections at select ports, as well as transshipping opportunities through larger container shipping ports to overseas markets. The initial service under current design is weekly and it anticipates capacity for over 500 inbound and 500 outbound containerized shipments per month, entering and exiting the Port of Humboldt Bay. It is expected that the service would grow over time. On a coastwise scale, the proposed marine highway service at inception would provide capacity for over 68,000 shipments annually. Shippers that do not have urgent delivery needs may opt for short-sea shipping as it becomes more cost competitive with rising fuel costs. Coastal short-sea shipping is over 3.5x more fuel efficient than trucking and thus also helps to reduce air pollution and contributions to climate change. The intent of short-sea shipping is to provide a greener and cheaper way to move domestic and international goods. Ultimately a West Coast-wide marine highway system could make over 100,000 less truck trips necessary each year.

Currently, the U.S. Maritime Administration (MARAD) under the U.S. Department of Transportation is developing their American Marine Highway Program (AMHP) in order to jump start the short-sea shipping business. This program will first establish marine highway corridors around the country and will then solicit marine highway public-private partnership project applications. Humboldt Maritime Logistics is seeking HBHRCD sponsorship of their marine highway project for submission to the AMHP, and eventually a resultant private-public partnership formation. The project consists of three sub-components seeking federal assistance through three different mechanisms. First, a mobile harbor crane is being sought from stimulus funds and a private match. Secondly, potential AMHP grant funds will be sought for a third-party West Coast freight lane analysis and marketing plan. Thirdly, an earmark is being sought in the federal Transportation Authorization Bill, to allocate public funds with a private match in order to initiate construction of two marine highway barges. These would be owned by the HBHRCD but would be operated by HML.

Findings/Recommendations

1. Look at fallow industrial land around Humboldt Bay and reconsider what its highest and best use are in the foreseeable future and change zoning, if necessary. Work with county planning staff, private land owners and Redwood Region Economic Development Commission (RRDEC) on a land use plan and infrastructure study.
2. Maritime business in Humboldt Bay is at low ebb and there are no immediate tangible prospects for an upswing other than individual projects (i.e. wind energy device transport, wave energy) and the re-opening of the pulp mill.

3. There is insufficient current business or prospects for new marine trade to justify construction of a new marine terminal at the Redwood Dock and a different use for the site needs to be considered.
4. Short sea shipping seems likely to expand as fuel prices increase. The federal government appears ready to fund development of this mode of goods transport and the Harbor District should continue to efforts to make Humboldt Bay the West Coast hub.
5. Work on a streamlined approach to project permitting to reduce impediments to development of desirable businesses, which will make it possible to attract more capital.

Forum II: Industrial and Light Industrial Development Options Around Humboldt Bay

Light Industrial development model and potential to grow businesses, including expanded use of incubators (Larry Oetker, Arcata Economic Development Corp): Larry Oetker, who is both the Community Development Director as well as heading the AEDC, gave an overview of the City of Arcata approach to small business development. He talked about the successful business incubator at the Alder Grove Ponds that is now filled. A new opportunity of a similar nature is being pursued on 20 acres just purchased from Britt Lumber.

Mr. Oetker explained the demographics of Arcata and related that to business targets to calculate likelihood of success. Their target is to create 132 jobs a year to keep pace with growth. He described different sectors of employment noting that many more people are operating home-based businesses that rely on computers for clients or companies based elsewhere. Mid-sized manufacturing businesses (25-75) are a major employer, but as firms grow they tend to relocate. Economic diversity is strength of Arcata and growth sectors include light manufacturing, tourism, and eating and drinking establishments. Mom and pop businesses are also very common. But the bottom line for Arcata is of course Humboldt State University, which is by far its largest employer. After breaking down tax revenue accrued by the City, Larry described the prospect for a Mad River Parkway Business Center that will generate jobs and provide a 19 acre park and access to the river.

Aldergrove Industrial Park took 20 years to fully mature as a business incubator and now most of the lots have been sold to successful business start ups. Larry stressed the importance of getting buy in from the public, noting that Arcata residents might otherwise be formidable opponents to any development. He stressed the coupling of open spaces with development so the community gets recreational benefits that mitigate other development effects. Mr. Oetker then shared thoughts on a full range of development options for the Harbor District's Redwood Dock. He noted that the Harbor District's bay jurisdiction does not extend on land, so permitting in the Coastal Zone and with other jurisdictions may be complex. He then highlighted how much wetland protection constrained development around Humboldt Bay and the need for a comprehensive approach to wetland mitigation. Larry then displayed an overlay of the footprint of the Aldergrove Pond on the Redwood Dock and showed that they were comparable in size. He finished his talk with a pitch for working together regionally. "We can make things happen in the way the community wants it done and we can make Humboldt County great in the next generation. That is what it is all about."

Biomass conversion to electricity and potential for growth and job creation (Bob Marino DG Power): Bob Marino was accompanied by Steve Jolly, forester, who helps coordinate the supply of fuel for DG Fairhaven Power. The facility is largely unrecognized by public but has been producing power since 1986 when it was constructed by Eel River Sawmills to get rid of wood

waste. About 40% of Humboldt County's electricity demand is met through biomass production. DG Power bought \$7 million worth of wood waste in 2008 and they have a 30 year contract with PG&E that is based on avoided costs for natural gas. This means that when power wholesale prices are up DG gets more money. Sometimes short term market conditions could drive DG Power into the red, but PG&E pays a fixed fee annually for consistency of power delivery. Bob explained how the price paid per kilowatt hour makes a difference in the radius from which fuel for the plant can be acquired. Fuel costs have declined since the pulp mill closure because of lower competition.

Steve Jolly says there is a lot more potential for biomass and that it saves land fill space, improves forest health and helps with cleaner air. Side benefits include less need for solid waste disposal and this should be considered in Public Utilities Commission (PUC) decisions. He noted that the amount that the PUC sets for purchase of biomass generated electricity determines the radius of land area from which fuels can be collected. Mr. Jolly also stressed that USFS forest health projects could help increase fuel availability and help with future forest productivity as well as reduce fire risk.

Converting the pulp mill to create value added products in conjunction with improving regional forest health (Bob Simpson, Freshwater Pulp): The big question of interest to the committee Bob anticipated is when or whether the pulp mill will be opened. He said he would return to that question, but he began by recounting the hazards of former chlorine based pulp mill in the 1980's. In 1992 they began conversion of the mill and were back on-line chlorine free in 1994. This is a major breakthrough because dioxin is no longer a bi-product and that is a substance that is highly toxic. Unfortunately, the significance of this breakthrough was not recognized and products did not command a value-added price despite that benefit.

Mr. Simpson pointed out that we have to work together to limit environmental pollution but understand that some pollution may occur. The trend at present for many major corporations is to export jobs and pollution overseas. Clean pulp inexpensively processed is returned to the US, but there is a major lack of pollution controls that are highly impacting the global environment elsewhere. Bob says it isn't responsible to outsource products given the new economic and global climate reality. He next pointed out that the regions forests are young and in need of thinning and that we needed businesses like Freshwater Pulp as a mechanism to advance forest health. Bob then mentioned that hardwoods like tanoak are out of the natural balance and that the pulp mill can help restore the conifers that sequester more carbon. The onset of sudden oak death syndrome in tanoak brings an element of urgency to the discussion. The tissue business is very value added and there is likely to be continuing strong demand. He has support from the community from environmental interests to labor. The business could create up to more than 400 jobs, but obtaining capital is currently difficult.

Note: The HBHRCDC followed up Bob's presentation with a letter to the California Public Employees Retirement System (CalPERS), but the initiative to get funding from this source was not successful.

Additional Opportunities Introduced Outside EDC: The Harbor District had two relevant presentations in its business meetings in early 2010 that have substantial potential and are added to findings here. John Hummer, the Western States representative of the Maritime Administration (MARAD) within the Department of Transportation, presented to the Harbor District Commission on the potential of disassembling ships from the Suisun Bay mothball fleet

in Humboldt Bay. These ships are currently being transported to Brownsville, Texas through the Panama Canal and each costs the government \$2 million to scrap. Mr. Hummer thought that the government could save money and that jobs could be created in our area, if we were set up to disassemble these ships. Before they can be moved, they are scrubbed and paint sanded off the outside of vessels, so there would be no chance for transport of invasive species. This prospect has several years lead time, but could create several hundred jobs for welders and laborers. The main question raised about development of this prospect was whether newer dry docks needed for this project have pollution control systems to make sure no waste generated is contained.

Stas Margaronis of Santa Maria Shipowning and Trading, Inc. presented to the Harbor District Commission on the prospect of building the modern ship fleet for short-sea-shipping in Humboldt Bay. He stated that the Jones Act requires that the higher fuel efficiency ships needed for the Marine Highway need to be built in America. Commissioners noted that this would cluster well with the ideas advanced by HML to make Humboldt Bay the home port for West Coast short sea shipping. Stas said that ships will not have heavy metals or pose a major risk of pollution because of new government requirements. Mr. Margaronis considers the District's Fields landing site to be ideally suited for this venture and is working on obtaining a lease option.

Findings/Recommendations

1. Explore development of a business incubator model like the successful Alder Grove model elsewhere on Humboldt Bay, such as at the Redwood Dock site or the Fairhaven Business Park. Maritime business park niches could include ship/boat building and repair, wave energy, Marine Highway technology, wood products, bio-fuels and aquaculture.
2. Develop a comprehensive land use plan for the Humboldt Bay area in conjunction with County and city planning and economic development staff and RREDC and follow up on implementation.
3. Provide recreational opportunities as mitigation along with development proposals wherever possible to get public buy in.
4. Provide a comprehensive study of wetland mitigation Humboldt Bay-wide.
5. Work to change U.S. Forest Service policy or mandated PUC rates paid for biomass electricity to help increase the radius around Humboldt Bay where cost-effective fuel harvest could take place.
6. Conduct a feasibility study of ship dismantling in Humboldt Bay, including new dry dock design and effectiveness of pollution control systems.
7. Pursue construction of the short-sea-shipping fleet in Humboldt Bay and work to increase community support to help secure government funding.

Forum III: Tourism Related Economic Development Potential

Riding the Tide of Tourism (Tony Smithers Executive Director of the Humboldt County Tourism and Visitors Bureau): Tony said he would paint a picture of who is coming to Humboldt and how we market to them. He noted that he did not have any expertise in promoting Humboldt Bay to travelers looking for an aquatic recreational experience, but that he thought it was a natural. Mr. Smithers emphasized that the Humboldt County Tourism and Visitors Bureau (Bureau) was a publicity and marketing organization funded by local governments, but also hundreds of small businesses. Their major priority is to get tourists to stay in Humboldt County longer and they use a variety of marketing tools to meet that objective. The range of publicity tools includes magazines, ad placements, getting travel writers to cover Humboldt and also

developing a first class website (www.redwood.info). The Bureau could be considered a wholesale travel sales agent. They co-market with other state-wide and regional tourism entities so that our reach is international and cost-effective.

How much is our tourism worth to Humboldt County? The 2006 gross figure was \$281 million (Dean/Runyon Consulting), which is very significant for us and the gross total of related business has grown 48% since 1992 and that trend is likely to continue. This amounts to 5,000 jobs in Humboldt and a payroll of about \$80 million (lodging \$55 million, more for dining). Even in a down year, Humboldt County does all right and in 2009 the rest of the States is down 15% while we are essentially flat. The bottom line is that tourism is a very resilient industry. Travel used to be a luxury while today's traveler considers it a necessary break from their stressful lives. Californians only have a few days, but European travelers may spend weeks or a month. There is a very significant potential for growth in this sector as we only draw a tiny fraction of the market.

Most (90%) tourists are on vacation and over 70% are from northern California, which means that there is lots of potential for growth from return travel. About 70% of tourists are first time visitors and about 80% stay overnight. With less discretionary income for travel, there is less airline travel and more by car. People used to range from San Francisco to Mendocino on weekends, (3 hours/circle of death) but now may come all the way to Humboldt for a three day weekend (5-6 hours). The majority of American tourists are baby boomers and they bring their families.

The redwoods are our major asset and the Bureau markets Humboldt as "the" place to come for the premier redwood experience. The second most marketable aspect is our beaches (The Redwood Coast). Mr. Smithers broke down the economic benefits of people making a decision to visit and gave examples of grassroots marketing. He estimates that one in four visitors was likely lured by the Bureau. The website markets successfully and Tony says we could market increased recreational development to get more people to visit. They get 1.4 million new hits a year and their new Google search engine is getting Humboldt businesses new clients. Tony also stated that development of a historic train and history museum could draw people who are active travelers (history buffs). More cooperation may be needed in Humboldt County to get National Historic District designation and development of historic assets.

Roundhouse Museum and Historic Train as Potential Major Tourist Attraction: Vision and Business Planning to Make It Real (Mike Kellogg and Jerry Tomzak, Timber Heritage Association): The Timber Heritage Association (THA) is volunteer, not staff driven and they have been very successful in tapping community energy and financial resources. This includes donation of a huge array of artifacts, including train engines and sawmills. Jerry Tomzak then showed pictures of moving huge train engines from Glendale to the Samoa Roundhouse near the Redwood Dock on Harbor District property. No tax money was spent, but Mercer Fraser donated use of equipment and operators. More artifacts are stored by Woody Murphy, who is a THA board member.

Mr. Tomzak talked about how THA is clearing brush along the tracks from Samoa to Manila and giving speeder car rides to stimulate excitement. THA has also marshaled hundreds of volunteer hours to put a new roof on the Boiler Shop and Roundhouse to preserve the building as part of its lease from the Harbor District. The THA would like a longer term lease arrangement that would help acquisition of funding and capitalization of a historic museum project.

Jerry noted that their ambition for a history museum included a working historic railroad and talked about other successful models such as the Durango-Silverton Railroad in Colorado that draws over 160,000 tourists a year and is a major regional draw. The 45 mile trip costs \$79 for adults and \$49 for children. The Skunk Train in Mendocino draws about \$11 million annual to the area. The THA estimates that it needs 35,000 to 40,000 riders to break even. This would have a very large economic development benefit for Humboldt County because it would bring people who would stay for several days and the customer target is an avid traveler. A 2003 study by Stone Consulting for the City of Eureka indicate a Samoa to Eureka train is potentially viable, although it might take 2-3 years to break even. THA's ambition is to also have a working museum, not static displays (i.e. working sawmill). The vision includes running locomotives on vegetable oil and making the museum complex a green building design. Jerry closed by sharing a vision of making Samoa a world class destination. Assets include the historic town of Samoa, the roundhouse, the Samoa Cookhouse and the Maritime Museum.

Mike Kellogg touched on marketing of the museum complex and train and cited a number of successful efforts nation-wide. Having a major working historic railroad would open up film opportunities. People dedicated to historic trains may travel from across the country and would actually pay for a weeks stay and volunteer to restore artifacts. Mike says the ideal historic train ride is about an hour, which would be the Samoa-Eureka and a shuttle could be operated so people could opt for one way tickets. Jerry pointed out that they have a feasibility study that includes Arcata to Samoa.

Eco-Tourism as a Sustainable Business Model (John "Hawk" Martin): Hawk Martin owns HumBoats, which is a 15 year old business he bought four years ago. He has come to target eco-tourists as his main clients for rental of boats and Kayaks. He operates his business out of Woodley Island Marina, and although his business only operates seasonally, it is growing. He leads kayak trips nationally and internationally as well as operating HumBoats.

Before beginning, he defined eco-tourism: "Responsible travel to observe nature that has minimal environmental impacts and improves the well being of the local people." Hawk talked about what a phenomenal asset Humboldt Bay is for eco-tourism because of its natural beauty and its relative good health compared to other bays and estuaries on the West Coast. Eco-tourism pays for the preservation of the environment in that it brings the community money for not following a path of development. Although Hawk pointed out that his job will not make him rich, he said he found it profoundly satisfying and opined that the eco-tourism market niche will be expanding as people grapple with the reality of climate change.

Humboldt County can make more money by branding ourselves as a place that cares about the environment. Although Hawk uses redwoods in his marketing campaign, his major assets are the bay, various estuaries and lagoons and the nearshore ocean for whale watching excursions. His business in 2009 is stronger than ever and is coming from all over the world. His clients are sometimes Europeans, but this year he trained a whole family from Oklahoma to kayak in the Humboldt Bay. Mr. Martin talked about how successful Godwit Days has become and the synergy of benefits for local businesses. He says service provision niches in eco-tourism abound and that there may be many jobs to be developed, although businesses may only be mom and pop scale. In closing, Hawk noted that hard times had caused the cancellation of Paddlefest and the Maritime Expo that have potential to become events that could be big tourist draws. He recommended that the community come together with the Harbor District so that these events

become a tradition. In closing, Hawk talked about how the Water Trail project will improve “infrastructure” for his customers (and keep them out of the mud) and specifically thanked Adam Wagschal, HBHRCD conservation director.

One If By Land, Two If By Sea: Cruise Ships and Humboldt Bay (Don Leonard, Retired Tourist and Visitors Bureau Director): To explain his title, Don noted that “one if by land” refers to Highway 101. There is a huge market potential for cruise ships and last year 9 million Americans took trips, although about 60% sail out of Miami. The industry has been down a little in the current recession but the number of trips taken has remained flat.

Marketing is key and the Harbor District annually joins “Cruise the West” (CTW) for \$3500 annually, but this includes Humboldt Bay in a very wide advertising campaign. Don talked about the three annual conferences/shows that Humboldt County is represented at by the Harbor District. Harbor District Commissioner Dennis Hunter and Eureka City Councilman Jim Worthen saw the potential of cruise ships in 1993 at the Sea Trade International show and called for an expanded marketing effort. As a consequence the Harbor District joined CTW and a Royal Caribbean cruise ship the Sun Viking visited in 1994, which was noted in the press as the first passenger liner to come in decades. They docked in Samoa and took the train to Eureka and Ron LaValle gave a talk about the natural history of Humboldt Bay that was well received.

A total of six cruise ships have visited since 1994, but the next-to-last one was fogged out and the train trip to Eureka is no longer possible. The last visit was in 2004 because the popularity of Alaska Cruises has risen and they get most of the fleet, have 2000-3000 passengers and are less compatible for Humboldt Bay visits. Fuel economy has caused ships to travel more slowly and take fewer stops. Dave Hull and Wilson Lacy commonly attend conferences and the Harbor District has done all that can be done in marketing. One ship a year would make the Harbor Districts investment in CTW. Super yachts are a growing market niche and these boats pay very high moorage fees elsewhere. A super yacht is 150-200 feet long and cost up to \$15 million and they spend 10% of their cost on maintenance, up-keep and moorage fees. They reposition annually in spring and fall and we are recognized by the super yacht industry as a destination. Victoria BC has just built a super yacht pier that has no vacancy every summer at a dockage fee of \$300/day. Super yacht joined the cruise ship marketing group so Wilson, Dave and Don are networking with these folks at the Sea Trade shows.

Green Tourism and the Eco-Hostel (Lou Litzke): Lew is a retired CPA who was the President of Hostel International when he first became interested in the Humboldt Bay Eco-Hostel. Hostels are the largest network for overnight accommodations in the world with over 40 million stays annually with over 5000 locations world-wide. Hostel stays in America still lag behind Europe with only 1.5 million stays annually with European and foreign tourist being the major users. Lew thought the time was right for a sustainable living eco-hostel on the bay and got a Ford Foundation grant for \$50,000 to explore market development. In surveying San Francisco hostel users, over half said they would come to Humboldt if the eco-hostel here was open. A sustainable living fest with 4000 attendees at Real Goods in Hopland was also extremely encouraging.

The goal is to develop a completely green eco-hostel with solar energy and a carbon positive footprint and a restaurant that serves local slow food. Runoff would run into a wetland for pollution stripping and an interpretive trail explaining Wiyot history is being worked on with the Tribe. Lew talked about various potential options for capitalization, but noted difficult time for

foundation funding. Corporate funders may be less receptive because they think we are too remote to help their visibility. The eco-hostel board is being innovative and looking at different mixes for funding. His board is looking at piloting a hostel up stairs at the Samoa Cookhouse. He thinks eco-tourism will grow and noted that sustainable energy demonstration could be major draw similar to ones in Europe. He thinks the eco-hostel could be of equal magnitude to the Turtle Bay project in Redding.

Maritime Museum (Leroy Zerlang, Madaket Operator and Humboldt Bay Maritime Museum):

Leroy says that the Eureka waterfront is still underutilized (it's lonely), but it is getting better. The addition of the candy shop at the foot of F Street has increased traffic and the Madaket can sell tickets there now. The Humboldt Bay Maritime Museum relocation to Samoa was a God-send and they now get over 100 visitors a day. Great traffic and parking. Museum is largely run by volunteers, but can generate revenue from donations and they have had more than 500 members. Leroy is no longer active in the museum at present. The reason the museum has survived because it remained small, so when business is slow, larger overhead did not harm it. He likes the new energy of the museum board. Don't build a big Redwood Dock, but get one suitable for the Madaket and small boats.

Business is seasonal because of the seasonality of tourism and they have tried to start as early as the Jazzfest, but it doesn't work. They start now with Godwit Days and by mid-June the Madaket is booked and that lasts through August, but by October it is time to put the boat away. Running an historic vessel is a major task with 29 permits required and constant maintenance a must. Getting tour bus business isn't that good a fit because of ramps and the cold microclimate on the water where elderly folks may get chilled. The boat runs as a labor of love. Only boat captains gets paid, but lots of folks helping keep the Madaket afloat are volunteers. More docks are needed on Eureka side so that Coast Guard ships and other attractions can act in synergy with existing businesses, including the Madaket. The boat will be 100 years old in 2010 and it is in the best shape it has been in for a long time.

Humboldt Bay Naval Museum (Leroy Marsh, Naval Museum): Leroy Marsh agreed with Leroy Zerlang's characterization of the Eureka waterfront and the need for more attractions. The Navy LSTI ship has been in the bay for 20 years, but it was only recently converted to a museum. There are only two of these left and it is the last one put on the water and it had more battle scars than any other. It is 153 feet in length, which is the longest ship on the bay when other ships are not visiting. They are open two days a week on Friday and Sunday mornings. The venture is completely volunteer driven and they are acquiring artifacts from Mare Island Naval Facility. The ship gets some tourist visitors, but the location has a problem with homeless people. This past year the Eureka Chamber of Commerce and a tour bus came by with European tourist. They are now joining with an LST maritime aficionados. Former crewman and fans come from across the country and if Eureka had better facilities, they might be able to lure national conference. They have new life boats that are important historic artifacts and they are rehabilitating them. They are motorized and could be a tourist attraction and actually could couple well with Maritime Expo. The museum is also acquiring many other artifacts having to do with navigation and they could be used for classes and ties to schools. Leroy touched on the same point made earlier by Hawk, that we need to make sure the Maritime Expo is revived.

Findings/Recommendations

1. Tourism related to Humboldt Bay could be improved with additional promotion and infrastructure improvements.
2. The Maritime Expo and Paddlefest need to be revived or modified (modernized) and made into annual events.
3. Timber Heritage Museum and historic train could be a significant tourist attraction, but capitalization is challenging and cost-benefit analysis of scale of development is needed.
4. Ecotourism is currently vital and has major potential for increase, if Humboldt Bay stays on the path of restoration and recreational infrastructure improvements are added
5. Increased fuel costs and a decline in the economy make prospects for Humboldt Bay being a major cruise ship port in the near future unlikely.
6. Super yacht business may have potential, infrastructure costs may be modest and it may be a fit for modifying docks adjacent to the Eureka Boardwalk.

Forum IV: Recreational Infrastructure and Potential Humboldt Bay Economic Development

Recreational Fishing Creates Jobs and Contributes to Quality of Life (Tim Klassen, Owner Reel Steel Party Boat/Humboldt Area Salt Water Anglers): There were more than 4 million salt water angling trips, generates \$2 billion in gross economic revenue and creates 20,000 jobs State wide. The gross revenue includes motels, restaurants, fuel, gear and all related activity. There are approximately 12-16 sport fishing commercial operators on the North Coast from Crescent City to Ft. Bragg. Boats are “six packs” or smaller boats than in were formerly used and referred to as party boats. This is more personal and allows flexibility to stop and watch whales or to get consensus on changes of itinerary in terms of location fished or species targeted during the course of a trip. People come from around the world with people having fished with Tim from Ireland, Austria, Belgium, China and New Zealand. People use the Internet to find out about our area and often come to fish for the very large, abundant Pacific halibut off Humboldt Bay. Some local folks book trips.

The ten day salmon season in 2009 generated very large amounts of business. We had the only open ocean salmon season and commercial sport fishing boats are coming from other areas like Bodega Bay. Mr. Klassen had talked to local tackle shop owners and business had improved 50% in the run up to the 10 day window for ocean salmon fishing in September. The window is short and a lot of congestion at boat ramps was anticipated. Tim said it would be much more desirable to have a longer season.

Recreational ocean angling has some upside potential again, similar to levels of fishing in the past. The problem is the salmon closures driven by Klamath River shortages and more recently by the stock collapse in the Sacramento-San Joaquin. Access to rockfish stocks is also limited by the Pacific Fisheries Management Council (PFMC) and the California Department of Fish and Game (CDFG) with Fort Bragg and Shelter Cove only getting 3 month seasons in 2008 and 2009. This is a very short window and access was formerly 6 months, not the current 3 months. Season from Cape Mendocino to the Oregon border was only open 4 months, and all waters deeper than 120 feet are shut all the time. This means that 99% of State waters are always closed due to the Rockfish Conservation Area (RCA) and the season in the remaining 1% is 3-4 months. This effort reduction has lead to a big rebound in fish stocks and limits can be had on every trip, although some people don't want to keep that much fish. Weather conditions also limit fishing effort.

The Marine Life Protection Act (MLPA) threatens to shut more areas of the coast within the 3 mile limit of State waters. Tim is hopeful that efforts initiated by the Harbor District to craft a locally generated Marine Protected Area (MPA) array will make the additional closures of nearshore waters less economically injurious.

What infrastructure is needed for sport fishing? Mr. Klassen said that there are several nice boat ramps and that accommodations and restaurants were also very good. Additional fish cleaning stations are needed, particularly at Woodley Island Marina. Additional floating docks are needed, especially at the launch facility on the Samoa Peninsula near the bay entrance. Other ramps need more cleaning due to build up of seaweed and sedimentation. Better parking would help on the Eureka side and restrooms need to be open early when fishermen go out. Security at boat ramps is sometimes a problem as transients break in to vehicles.

The potential for growth is there. With the Internet, people track fishing and book within a few days when fish like albacore tuna become available. Tim has a website and a daily fish report and it has really worked. He has also been featured in fishing magazine. The window for fishing is short and loss of salmon makes it difficult to thrive economically in Tim's business. One fish halibut limit diminishes demand. Tim suggests that a longer season with a lower limit would be good. On the plus side, there is now a 3-4 week fishery for crab before the commercial season opens__

Harbor District Recreation Support, Woodley Island Marina and More (Dave Hull, HBHRCDC CEO): Dave did a recap of the marinas and boat launching facilities around Humboldt Bay. He noted there are 6400 boats registered in Humboldt County, which does not include kayaks or canoes. Dave talked about recreational craft launching facilities at Woodley Island Marina, the Humboldt Bay Wildlife Refuge, Adorni, Target, the Humboldt Rowing Association and the Arcata marsh. District has recreational areas like the Park Street wildlife area. Other wildlife areas the District manages or co-manages are the mouth of Elk River, the King Salmon beach and on Woodley Island. The Fields Landing Boat launch is being shored up.

Mr. Hull then described the services the Woodley Island Marina services for mariners, but also pointed out that the public uses the island for walking as a park. Use of the marina is skewed toward recreation in the summer, but more towards commercial uses by fishermen in the winter. While Woodley Island Marina is the flagship of the Harbor District marine and recreational service, they also operate the Shelter Cove boat launch. The District has obtained \$1.7 M to shore up the breakwater and launching area. They also installed and maintain a fish cleaning station. The State Lands Commission leases the District the tidelands of Shelter Cove.

Dave pointed out that the District partners with the Timber Heritage Society to allow access to the public to the roundhouse. Paddlefest and the Humboldt Bay Expo are an annual event that draws 4,000-5,000 people, but are not being conducted in 2009. The District is also an active partner with Redwood Community Action Agency in developing water trails and will be working cooperatively to get interpretive signs posted.

Viewing Nature and Bird Life as a Draw for Recreational Tourism (Jim Clark, Audubon Society): The bird watching on Humboldt Bay is first class in terms of the number of birds and the diversity of species (>250). This draws lots of people from out of the area, including the 200-300 people for Godwit Days annually in April. Mr. Clark talked about the amount of money generated through bird watching related tourism and California is the number one destination in the nation. Wildlife watching expenditures are approximately \$140 per day, but the gross expenditures over a year State-wide is more than \$500 million. Although Godwit Days is our banner event, rare species occur in winter and influx of birders is significant when rare birds are sighted. People monitor the Internet respond to rare sightings and come almost immediately. Bald eagles are being sighted in 2009. The wildlife habitat around Humboldt Bay is being expanded. There is over 1000 hours of guided birding trips around Humboldt Bay annually. The Klamath-Siskiyou area to the east of us is also a biological hotspot and could be more of a draw. Jim thinks that there is a major potential increase in ecotourism related to birding, if there was more promotion. He then described how Audubon members are contributing to science and bird sightings are recorded. There is quality assurance and quality control so there is trustable data on-line. The demographic is comprised of baby boomers, but younger people are taking up the activity. Visitors tend to be from this country and less international tourists. We could target these folks more and also not just in summer. Hawk Martin noted that about 30% of his clients are bird watchers and that using a kayak is a great way to watch them without disturbing them. He also uses kayaks to view birds on offshore rocks near Trinidad. Discussions then touched on how to promote birding for ecotourism. On the closing note, Mike Wilson noted that Sunset Magazine had a feature article on Humboldt Bay in its current edition.

Surfing and Wind Surfing Bring Tourism and Need Infrastructure Support (Jennifer Savage): Jennifer notes that there is considerable use in the area and that Cape Mendocino is a world-class wind surfing site. The surf is big here and has sharks, but none the less surfers are drawn to the area. It is difficult to promote surfing and wind surfing because the sub-culture would rather have less crowds and does not want publicity. Whereas surfing at Camel Rock used to have only 10-20 surfers, there may now be 50-60 people in the water. Wilderness surfing has a lot of allure and Humboldt County has spots like Big Flat that draw surfing tourists. Infrastructure needed for wind surfing and surfing are showers and better parking. In some cases, water trails access could also serve windsurfing. Surfrider is a cooperator on clean ups and host events like Surf for Peace that draw some people from out of the area. The group is excited about collaboration to improve infrastructure and Jennifer noted needed projects include:

- Trail maintenance and signage at Camel Rock,
- Showers, parking and dogi-pots for Moonstone Beach
- Kiosk, shower and dogi-pots for Samoa Beach,
- Shower at the North Jetty, and
- Bike path from North Jetty to Trinidad.

The Humboldt Bay Harbor District could assist with any of these projects. Larry Oetker noted that watching surfing is very entertaining and could be promoted more as something for tourists. This is particularly true of the mouth of Humboldt Bay.

Bike Trails and Water Trails Can Help Stimulate Our Economy (Jennifer Rice, Redwood Community Action Agency, NRS Co-Director): Jen started by passing out information from the Humboldt Bay Trails Trust and information about walkable communities. Active transportation is the theme for revitalizing communities. Ms. Rice said that her talk would have two areas of focus, water trails and multi-modal trails on land.

Water trails around Humboldt Bay are a natural because of its amazing beauty and biodiversity. These entail getting points of access, interpretive signs, restrooms, parking and some promotion to increase use. Recreational boating sales, particularly kayaks, are booming and this is a growth category. Study conducted by RCAA in cooperation with the Harbor District is complete and has targets for beginning construction at a number of locations. The full report was in final draft and will be available from RCAA. It includes maps and guides for users that will be interpretive signs but can be used by people in their current report form. The implementation plan has habitat maps that make sure there are no conflicts with endangered species.

The water trails will help focus interest on Humboldt Bay recreation and increase use both by locals and tourists. Paddling tourists spend quite a bit on accommodations and meals and there is a substantial local benefit already and much more potential for growth. Hawk Martin says that focus of water trails is only access, but we need markers around the bay that mark trails. This is common in Washington and Oregon, but permitting seems to be an issue in California.

Ms. Rice then talked about the nation-wide rails to trail movement where more than 1500 miles of trails have been created. She talked about the Redding Turtle Bay bridge and how renovation of the Hammond Trail Bridge could become a tourist draw in itself. Jen showed the proposed California Coastal Trail route and talked about the many studies that have been done, including engineering and feasibility. Michael Buettner participated on the Eureka Trails Committee before becoming the Chair of the Humboldt Bay Trails Trust. He said the committee heard from citizens again and again that they wanted more trails near the bay and now city plans include expansion of bay side trails.

All the studies leverage potential for funding and coordination between agencies is also on-going. If more pre-work had been done, then stimulus money could have been used to start construction. There are seven trail routes currently under consideration and the Humboldt County Organization of Area Governments (HCOAG) has started to play the role of lead agency. The infrastructure for trails creates construction jobs (i.e. Miller Farms and Hammond Trails). Trails need to be promoted and signs to attract more tourists to the Hammond Trail are being completed, although installation has been stalled due to the California budget situation.

Jen Rice talked about the multiple benefits of having trails to the community. Businesses near trails experience growth and new businesses open near trails when they are constructed. Property values increase near trails too. She talked about how private waterfront property owners are often willing to cooperate in trail construction or to all access or easements because they add to the value of the project. This includes private partners like Security National, but other segments are publicly owned (CalTrans and NCRA). One problem with trails is making sure that you have partners for trail maintenance. Randy Gans said that Security National is studying the trails option and building it in to development options. He questioned how we can overcome regulatory hurdles. He says the Humboldt Bay waterfront is a mess in part because permitting is so onerous. Pat Higgins mentioned the recurring theme of needing to streamline regulatory processes for permits and that other sessions have mentioned the Harbor District as

potential lead. Jen Rice said that would be a big help. Greg Gardiner says that permitting is the biggest impediment to all development around the bay.

Health Benefits of Improved Recreational Infrastructure (Ann Lindsey, Humboldt County Health Officer): Ann began by recounting a study on the cost of inactivity for communities and it is \$121 million per year for Humboldt County per year. The number of sick days is higher and so there is substantial labor productivity cost. HumPal (Partners for Active Living) promotes more physical activities for residents of the County. Presently less than 63% of adults meet activity level goal of 5 periods of 30 minutes of activity per work. Need to get that number down to 50%. Increasing activity reduces chances of getting stage II diabetes, which is at epidemic proportions. Students and children are overweight and have increased disease risk earlier in life than previous generations. Lack of exercise also contributes to depression and attention deficit disorder. Need to create trails so that kids have safe and inviting ways to get around. We need trails to be connected or they won't be used. Now people have to drive their kids around as a result increasing fuel costs and air pollution, as well as tying up parent's time. Getting people out of their cars is part of the goal. Right now the cost of transportation can be high for low income families. This leads to the policy arena where planning communities for public transport and multi-modal transport access helps in the long run for public health and economic security. The ratio of trails to roadways is greater than 99:1 and Ann noted that we should do better than that. The savings annually in health costs with even a 5% increase would be approximately \$5 million per year, and thought this was an attainable near-term goal. A shift in culture could ultimately save up to \$50 million annually.

Findings/Recommendations

1. Harbor District should continue coordination of regional MLPA response in order to maintain access to fish stocks and increase economic development benefits related to sport and commercial fishing.
2. Infrastructure needed to support fishing include getting more fish cleaning stations, keeping boat launching ramps clear of seaweed and sediment, providing more parking for boats and trailers, restroom facilities and better security for cars at launch facilities.
3. Harbor District MPA Work Group should consider endorsing measures to reduce bag limits for rockfish and extend the season to increase economic benefits of sport fishing.
4. Promote birding activities in the region, not just Humboldt Bay, could substantially increase eco-tourism.
5. Harbor District should help create showers for the surfing and windsurfing recreational users.
6. Get funding and implement water trails program then promote nationally and internationally to increase ecotourism.
7. Harbor District needs to take the lead on permitting for trails around Humboldt Bay and become a management partner in order to expedite construction.

Forum V: Restoration of Humboldt Bay: Current and Long-Term Economic and Productivity Benefits

What Kind of Payback Can We Expect from Humboldt Bay Restoration (Aldaron Laird, Trinity Associates): Aldaron is a natural resource consultant who works for clients on permitting of projects with potential impacts to aquatic environments. He began his talk by touching on regulatory hurdles for wetland and stream enhancement noting that there were 8 agencies that needed to be consulted. He said the regulatory process is burdensome and costs often are not covered by restoration grants or contracts from government agencies. He joked that you need a PhD in regulatory ecology.

Mr. Laird gave a brief history of the restoration movement, which he believes was rooted in activities at Redwood National Park just after its acquisition. Restoration on that scale had not been done since the advent of the Civilian Conservation Corp in the 1930s and park staff and a wave of contract workers began to study methods documents that came from that prior era. The talent pool from which the National Park Service could draw both for staff and contract work was substantial because of the number of young people who had come to the area to attend Humboldt State University. Aldaron noted that both he and Mark Andre, another of the evening's presenters, were both involved at that time in the RNP work. After that work was complete, many folks then began to export lessons learned and formed numerous business enterprises, many of which still thrive today.

The application of RNP techniques to salmon and steelhead restoration has formed a whole cluster of businesses based in Humboldt County and what Aldaron terms a "restoration industry". Although he asked various agencies how much they spend each year in restoring Humboldt County's rivers and watersheds. Only the California Department of Fish and Game was able to respond, but their expenditures alone have averaged \$4.2 million per year for the last 10 years. He pointed out that this is only a fraction of the total amount spent, but in and of itself a substantial contribution to the economy. Firms conduct business around the State, but remain based in Humboldt, including McBain and Trush, Tom Payne and Associates, H.G. Harvey and Associates, Pacific Watershed Associates and Northern Hydrology. State and federal agencies have also staffed up to oversee restoration projects, but also to oversee implementation of the Endangered Species Act and to gain compliance of other statutes passed in the 1970's: U.S. Fish and Wildlife Service, National Marine Fisheries Service, Natural Resources Conservation Service, CDFG, North Coast Regional Water Quality Control Board (NCRWQCB), and the Army Corp of Engineers. Many of these agencies also fund projects.

Governments also fund very large restoration projects on their own land with USFWS spending substantial amounts on its newly acquired Humboldt Bay properties and the City of Arcata having done very large scale restoration associated with the Arcata Marsh and all lowland habitats of creeks draining from the city to the bay. Private parties have also cooperated or allowed restoration work on their properties. These projects bring money from the outside and help this area thrive.

We have just scratched the surface of restoration potential and have now mastered the knowledge, but there is much more work to do. Over the last 150 years we have filled over 90% of the historic salt marsh surrounding Humboldt Bay and we have only just begun to reverse those processes. Reconnecting wetlands, marshes and creeks tributary to the bay increase the bay's productivity, but also increase fisheries. Aldaron closed his talk by describing Humboldt

Bay as one of the last and best opportunities for restoration in California because it is not despoiled and has generally high water quality.

Greg Gardiner asked about where we are in the progression of restoration of the bay. Is 90% still degraded? How much will ultimately be restored? How much will it cost and where will the money come from? Aldaron described the vast expanse of salt marsh surrounding the bay before railroad dikes were built along its margins and lowlands reclaimed for agricultural activities. As the tide filled these wetlands with each tidal cycle, huge quantities of nutrients were released into Humboldt Bay that were lost when the tidal area and flux were reduced. We thus greatly simplified the biological functions of the bay. Other bays in California have lost 99% of their salt marshes, so we are better off.

The decisions we made 100 years ago were based on the need to expand agricultural productivity that was critical to early settlers, but now we may be able to afford to re-expand the marsh system strategically in some areas. We are going to need to analyze how global warming and sea level rise will affect our bay lowlands and shore up levees to prevent inundation. As we plan for this, we need to look at how much of the formerly sub-tidal lands we can afford to “give back” to enhance Humboldt Bay’s productivity. One hundred percent of the original salt marsh will never be restored, but maybe a number in the range of 20-25% may be possible. Saltwater marshes have greater benefit than freshwater ones for global warming because they do not produce methane but do sequester carbon.

The dikes around the bay were not constructed by the Army Corp of Engineers and they are often owned and maintained by individual land owners, with the exception of one levee district in the North Bay. These dikes are in many cases over 100 years old, but it is very expensive (and for many not feasible) currently to get permits for their maintenance or rebuilding. Only after dikes fail in storms are permits easily obtained under flood waivers and money is available from the Federal Emergency Management Agency (FEMA) only for those segments that fail. Mr. Laird recounted how he spent two years assisting Mad River Slough land owners in obtaining permits to rebuild a short section of levee and fees were \$75,000. The original dikes could have been built in just a few months and private land owners are very frustrated with the slow pace and high expenses of trying to fix their dikes. Global warming is going to break these old levees. It is time to take comprehensive approach to shoring up levees around Humboldt Bay. Lessons from the USFWS in the South Bay and the City of Arcata, which are both raising their levees, may help us formulate mitigations and start to attack this program on a bay-wide scale.

Pete Oringer followed up with the question of whether the Humboldt Bay Harbor, Recreation and Conservation District should possibly try and take the lead on the programmatic permitting for shoring up the levees and for restoration activities. Pete thought these two areas were related and narrower in scope than other possible permitting issues. Aldaron said he thought this was a natural for the Harbor District, but said that it would not be easy. He pointed out that agencies are not willing to give up their jurisdictional authorities and that other efforts had been tried to get them to work more collaboratively had failed. NMFS has sponsored discussions as has the Humboldt Bay Ecosystem Management project. Under one scenario, the Harbor District would work on a bay-wide permit with defined mitigations and then individual land owners would only need to get a permit from one agency. This should work since the Harbor District has authority over tidelands and the bay perimeter. This would save agencies a huge amount of work because they would not have to deal with dozens of individual bay-side land owners.

When meetings were held, all agencies except one said they were open to the idea of group permits, with only the California Coastal Commission refusing to participate. This stopped any further action or discussion up to now. Pat Higgins asked if the Coastal Commission might consider a blanket permit, if it were shown that there would be overall benefit to Humboldt Bay. Aldaron said that there is precedent for such action in San Francisco Bay, but that we would have to get both scientific and political support to obtain such an outcome. He said that if the case were well made and political support lined up that the Coastal Commission would have a hard time saying no.

Larry Oetker noted that there is no way to mitigate at present for any wetland modification, so many business projects are stopped even when the biological value is low. Aldaron concurred saying that the City of Arcata has recreated dozens of acres of saltwater marsh and enhanced an equal or greater amount of freshwater wetlands, but they get no credit through any type of mitigation bank.

Greg Gardiner asks whether the Harbor District jurisdiction covers this and whether it is feasible to carry out. Commissioner Pat Higgins responded that the District does have the authority and that it currently permits levee repair and construction activities, but that it might need grant funding or cooperative funding because it would take more staff time than current personnel could handle. Commissioner Mike Wilson added that the Humboldt Bay Management Plan Committee has had active discussions on this issue. He said that the current methods of just responding to flood damage caused large areas to be armored with rip rap with few mitigations. Mike characterized this as a poor process and outcome. A subcommittee is working on protocols for dike shoring up and rebuilding, but it is a largely volunteer driven effort and may take some time.

How the Harbor District would fund a blanket permit process was a question raised by Greg Gardiner. Commissioner Higgins responded that external funding from the State or federal government might be difficult to obtain in the short run, but that it made good sense in the long run. He noted that parallels between our need to protect low lying areas near the bay with areas near the sea in Holland, saying that we will either follow their model or repeat the mistakes of New Orleans if we wait too long. Pat went on to say that if government money were allocated, that the District's financial condition would benefit as grants or contracts allowed staff development or retention of consulting services. Revenue generated on administration would also help improve the District's fiscal solvency.

Commissioner Wilson pointed out that the District has staff capacity to do some of the studies and pre-work but agreed with Commissioner Higgins that taking on the permit authority is beyond current staff capacity. Mike also anticipated that funding would likely be forthcoming from the same agencies that currently fund flood relief and issue permits for it. Pat noted that Dr. Chad Roberts is on retainer and has substantial expertise in this area. Ted Kuiper pointed out that this constraint continues to arise in almost any economic endeavor around Humboldt Bay. Permit streamlining could cut years off the time necessary to make projects happen and save tens or hundreds of thousands of dollars. He has had to deal with permitting and its costs and uncertainties and noted that this was a common theme in other Economic Development Committee meetings and that the recommendations of the committee must include getting the Harbor District to rise to this challenge. The activity should not be restricted to just restoration but rather all activities recommended or endorsed by the Humboldt Bay Management Plan.

Larry Oetker points out that if normal levee repair permits cost \$75,000 and the Harbor District blanket permits would save time and a more modest fee for the land owner could still be considerable revenue to the District. Aldaron Laird pointed out that almost every type of project and mitigation has been now permitted and best management practices defined. Ted Kuiper reiterated that we not restrict the Harbor District's focus to just restoration. Commissioner Higgins noted that doing a streamlined permit for restoration activities might build the trust with the Coastal Commission and Mr. Laird concurred. Aldaron says that NMFS is ready to do a blanket permit for all restoration projects, which is a good sign. Pete Oringer asks if there might be a streamlined permit for all agencies except the Coastal Commission so there would be just two processes for land owners to deal with. Aldaron thinks this would be progress. He says that we need to have the Harbor District step forward because no other agency has the nexus or authority. Mark Andre added that a mitigation bank system needs to be addressed, if restoration is to proceed.

A 20 Year History of Involvement by Arcata in North Bay Stream and Wetland Restoration

(Mark Andre, City of Arcata): Mark ran a Power Point to show the progress of restoring Humboldt Bay areas in and near the City of Arcata. He pointed out that Arcata started its restoration efforts almost 30 years ago on Butcher Slough and also put together a Creeks Management Plan in 1990. There is a whole restoration program for creeks that only partially overlaps somewhat with the presentation this evening. Mr. Andre has now overseen 20 years restoration on 12 square miles of wetlands and tidelands. Expenditures over the last decade are over \$15 million over the last 10 years. The City also has an active restoration program associated with its Arcata Community Forest and restoration actions are embedded in many policies and ordinances. Flood control, storm water and development issues all overlap. All the activities of the City of Arcata and the staff time devoted help provide a match for grants that provides them a competitive advantage for funding.

Mark shows slides of the wetland development between the Arcata March and Samoa Blvd. and pointed out that there are many heavy equipment operators that are contracted in construction of these, including local contractors like Hooven Construction. Dike and levee repairs also employ similar contractors or are carried out by City staff. The heights of the levee take in to consideration global warming an sea level rise. The City is maintaining agricultural land use at the mouth of Jacoby Creek while increasing fish habitat, wetlands and habitat favorable to Aleutian geese.

Funding partners include the California Department of Water Resources, CDFG, Wildlife Conservation Board, NRCS, NMFS, USFWS and foundation sources. Mr. Andre said that the Campbell Creek restoration project, which cost \$3 million and was very large scale; consequently, this was a good lesson of sorts for agencies that have conflicting guidelines. The Coastal Commission was reticent to allow a project that would diminish freshwater wetlands in pastures that were to be converted to salt marsh. Mark pointed out that their own statutes give highest priority to restoration of salt marsh and tidal marsh.

Volunteers can also contribute to small scale projects. The City also likes to include elementary and high school groups in restoration so that they can watch the progress over time and feel ownership in the projects. Creating pride in the projects is important.

Mr. Andre then talked about how forest management and development had to take into consideration protection of the downstream restoration projects. Problems could arise if

sediment comes from disturbed sites or if the flows were changed substantially by allowing too much impervious area. The Arcata Community Forest is managed by group tree selection in clusters that mimic natural forest processes and management is compatible with advancing late seral conditions at the same time as putting out an annual average of 700,000 board feet of timber.

General discussions that followed were on the overall benefits to the restoration of Humboldt Bay in terms of the productivity for fisheries and wildlife, including salmon, crab and other species of value. Larry Oetker framed the long term nature of restoring the bay and how important it is to build trust with all the land owners around the perimeter. He says that this is a multi-dimensional opportunity because by winning trust of agencies through restoring the bay, we can then also make progress on making project permitting less onerous. Increased ecotourism is an additional economic benefit likely to be derived, as people come to see how we have restored our bay and to watch the wildlife that abound as a result.

Findings/Recommendations

1. The Harbor District should create a plan for streamlining permitting for restoration projects around Humboldt Bay.
2. The Harbor District should seek partners to work towards a programmatic permit from all agencies so it takes authority for restoring and rebuilding the levee system and shoreline around Humboldt Bay to a level that protects infrastructure from climate change while enhancing habitat and recreational values.
3. The Harbor District should also take on the task of proposing a mitigation bank for restoration projects and other activities and to work with various agencies to overcome conflicting guidelines.

Forum VI: Fisheries and Aquaculture and the Humboldt Bay Economy

Shellfish Mariculture on Humboldt Bay (Todd Van Herpe Humboldt Bay Oyster Company):

There is a small number of oyster farmers on Humboldt Bay, but they create a lot of jobs and good food for the local community. The original driver for oyster culture was the Gold Rush because natural stocks were depleted and aquaculture was necessary to maintain supply. The native Olympia oyster was slow growing and more subject to depletion. Historic shots showed a redwood plank culture platform that failed. Todd noted that modern practices only lightly disturbed the environment and that that no wild species are harvested or harmed by oyster culture operations. Consequently, there are no management concerns or constraint to harvest.

Todd recounted a survey done by Ted Kuiper, retired Humboldt Bay oyster company operator. The worth of farmed shellfish ranks high among other fisheries. It ranks third behind crab and squid on a State wide valuation. The payroll and benefits at the California-wide industry is \$6.2 million and pay \$1.2 million in taxes. There are 208 direct jobs and there is an economic multiplier of an additional equal number of jobs. There are 56 jobs on Humboldt Bay with oyster ventures and an additional 56 in direct jobs. The local payroll from direct jobs is \$1.4 million. Many companies are family run operations. The Kumumoto oyster is the highest value product that comes off the bay and they are coveted around the world.

The Humboldt Bay aquaculture owners understand they must help work towards a healthy bay on which their business relies. They participate in monitoring of bay waters and share data with agencies. Oysters from Humboldt Bay are ranked as a “best-choice” seafood by the Monterrey

Aquarium Seafood Watch rating system and by the Blue Ocean Institute rates them positively. Oyster operators are involved in community events and sometimes supply oysters at benefits. The Arcata Oyster Festival brings in \$750,000 to the community over one June weekend. Humboldt Bay was voted the Oyster Capital of California in 2009. Oyster operators help clean up sloughs of trash and have adopted a section of Highway 101.

In response to a question from Pete Oringer, Todd said that the Harbor District might consider defining the footprint of the area that could potentially be developed for additional aquaculture, including on-land facilities. Pete followed up with the comment that permitting for such activities be one of the objectives. Todd responded that people not think about permit streamlining as less protective, just less redundant. Not all grounds leased are utilized for buffers and Todd didn't know what the area currently under permit or potentially of use. Greg Dale offered that there are 18,000 acres of flats in Humboldt Bay and that only 4,000 are under lease, with less under use. Greg disclosed that Greg Dale spent over \$1 million on permitting when his Coast Seafood venture last expanded.

Opportunities for further development of shellfish aquaculture in Humboldt Bay (Bill Taylor, Taylor Mariculture): Todd Van Herpe introduced Bill and Paul Taylor of the Taylor Shellfish Company (www.taylorshellfishfarms.com/) of Shelton, Washington and Bill Touscheaux and Bill Dewey of their company. They are the new owners of Kuiper Mariculture and their local manager is Mitch White, who worked for former owner now manages for Taylor Shellfish.

Bill Dewey began the presentation for Taylor Shellfish and explained their family based business model. The Taylor's have been in the shellfish business for five generations. He talked about the growth over time of their company and showed pictures of their expanded operations in Washington State and around the world. The latter includes, Mexico, Hong Kong, British Columbia and Kona, Hawaii. They have 400 employees in the U.S. and an additional 100 world wide. Their workers all have health care benefits. Taylor Shellfish Company participates in community events and fundraisers as well.

The aquaculture industry Pacific Coast wide is \$111 million. There is an emphasis in Washington on restoring the native Olympia oyster, which is challenging but Taylor Shellfish now has 1,000 acres in native oyster culture. The Pacific Oyster native to Japan was the staple for the industry. Not until the 1970s did anyone shift to growing oyster seed instead of relying on seeding from existing communities. The Taylor Shellfish Company piloted these techniques and went further to culture algae for oyster starts. They realized that the cold water temperatures in Washington were hampering seasonal growth and they now fly oyster starts to their Kona Hawaii facility to accelerate growth. They co-crop with shrimp in the Kona Aquaculture Park because they grow faster and the shrimp are easily cultured in that location as well.

Mr. Dewey noted that there may be some potential for an aquaculture park in Humboldt Bay, but said Paul Taylor would address that in greater detail. He described how oyster culture is ecologically sound. The oyster business has gone from one where most of the product was in jars, but today the live oysters are the bulk of the market. He touched on other species that might be cultured in Humboldt Bay, which include mussels and different kinds of clams.

Bill Taylor then picked up the presentation. He talked about the excitement of the company when they bought Ted Kuiper's Humboldt Bay operation. The clean bill of health that Humboldt Bay has is a tremendous advantage because it allows oyster starts (spats) to be shipped around

the world. They shared Ted Kuiper's vision of cautious expansion and development of more land side facilities to support production within the bay, but also to a wider area. Since they have only been here a year, they are getting oriented and assessing potential to help the industry grow. Preliminary observations are that there appears to be room for growth, especially in oyster spat. Bill talked a little about how an aquaculture park might work and the challenges of diversifying culture to other species.

City Sponsored Projects Supporting the Fishing and Aquaculture Industries (Marie Liscom, City of Eureka): Marie Liscom talked about the Eureka's waterfront revitalization plan. The waterfront project has spanned decades and has multiple funders. The City formed a Working Group to try and get agreement on project direction and public acceptance in 1992. Unions, environmental groups, private non-profits, business people, citizens groups, fisherman and sea food processors were all invited. The group worked on the plan and prioritizing activities and it was ratified in 1993. She then provided a list of those priorities.

Two completed project elements include the Bonnie Gool Guest Dock and modernization and rehabilitation of the Small Boat Basin. The Eureka Economic Development Department applied resources and provided staff to help with these projects. They also co-participated in the Harbor Deepening Project. The Boardwalk project was the next, which has a nice tie into Old Town. Eureka also co-participated in funding the HSU Boating Safety by donating the land. She showed pictures of areas at the foot of C Street that have been acquired and will now be part of the new Fisherman's Work Area, Fisherman's Dock and C Street Market Square the next phase and permits are now in place to begin construction. The infrastructure will support fishermen, but also will be an attraction for local residents and visitors. It is envisioned that the farmer's market will allow for direct marketing. The City helped fund the Eureka Ice Facility because the need of the fishing industry were urgent.

Future projects include a new fueling facility. Rebuilding of Dock B is on the longer term list. The total investment of the City of Eureka in the waterfront is more than \$56 million.

Collaborative Fisheries Data Collection and Attaining Regional Co-Management Status as a Means of Realizing Sport and Commercial Fishing Economic Potential (Patrick Higgins, Humboldt Bay Harbor District): Commissioner Higgins gave a Power Point presentation very similar to that available at (<http://humboldt-bay.org/harbordistrict/protected-area-workgroup/documents/Patrick%20Higgins.pdf>). Since the presentation is somewhat dated, the passage that follows includes points raised, but also more current information as of the time of the writing of this report (4/11/2010).

The Harbor District formed a Marine Life Protection Act Initiative (MLPAI) related committee to play a proactive role in design of Marine Protected Areas (MPA). The committee was formed in May 2009 and met periodically throughout the remainder of the year. Discussions within the committee helped spark regional dialog that resulted in a North Coast Tri-County Work Group made of fishermen, conservationists, Tribes, scientists and regional government representatives. Grants through Del Norte and Mendocino Counties and the Harbor District provided staffing, technical support and facilitation so that a North Coast External Alternative Array could be crafted and one was submitted on February 1, 2010. The MPA Oversight Committee is still functional and governments and tribes throughout the region are signing a Memorandum of Agreement (MOA) so that the North Coast can act in a coordinated way on fisheries issues related to the MLPA but also other processes in the future. Additionally, the MOA would allow coordinated activity on issues such as sediment management.

The MLPAI process is continuing in 2010. The Regional Stakeholders Group (RSG) has been assembled and includes many people who worked collaboratively on the North Coast external array. The Science Advisory Team (SAT) is active, but seems to be carrying forward guidelines from other areas, which is against the request of regional governments made in previous letters to Resources Secretary Mike Chrisman. The MLPAI will conclude with Governor Schwarzenegger's term in November, and the North Coast will watch with interest as the Blue Ribbon Task Force that is part of the MLPAI process makes its decision later in the year. If the fewer large conservation MPA approach that avoids closures within 10 mile port safety zones is not accepted, and Native American fishing and gathering rights are not upheld; then a challenge is likely forthcoming from our region.

The Harbor District has received \$200,000 for beginning collaborative fishing to gather baseline data in 2010. Commercial and sportfishing interests will be paid or volunteer to collect data from Crescent City south to Albion, which is the entire North Coast region. The objective is to follow this up for several years until sufficient data are accumulated so that we can not only judge the effectiveness of our MPA strategy, but also to supply data to the Pacific Fisheries Management Council (PFMC). The latter sets limits and seasons for rockfish that have been very limiting. They operate on the precautionary principal when there is no data; therefore, they shut our seasons to protect species like yellow-eye rockfish and canary rockfish that may be depressed Pacific Northwest wide but may not be in trouble locally. More data could give the PFMC and CDFG, which sets seasons and limits inside the three mile State waters limit, more comfort and the ability to allow more fishing.

By plugging data gaps in a coordinated way the Harbor District would be assisting the North Coast region to become a co-manager of nearshore ocean fisheries. More surety in management would provide more economic stability and would likely stimulate reinvestment in the fishing industry and allow recruitment of a new generation of fishermen. Pat invoked the New Zealand Fiordland Marine Guardian model of co-management (<http://www.fmg.org.nz/>). Other regional fisheries issues that could also be dealt with Individual Transferable Quotas (ITQs), which could lead to the privatization of fisheries, and salmon management.

Ships to Reefs Update (Casey Allan): Casey was allowed to briefly present about the possibility of sinking clean ship hulls off the mouth of Humboldt Bay to create more complex and productive fish habitat. There is a surplus of ships in the Suisun Bay moth ball fleet that are now being transported to Brownsville, Texas where they are disassembled. Casey thinks that the ships, which are cleaned to U.S. EPA standards, could be less expensively disposed of and provide additional angling opportunities very near the mouth of Humboldt Bay.

Brownfields: Commissioner Higgins read a recommendation from committee member Randy Gans, who was otherwise unable to attend and asked for discussion at the beginning of the panel. Randy's suggestion was that agency personnel, business people, citizens and environmental groups be convened by the Harbor District to assess contaminated areas around the bay and to put together a tiered strategy for abatement of problems. He saw this as a way for the community to help get political support that could cut red tape.

Findings/Recommendations

1. The Harbor District should create a map of potential areas of expansion of the in-bay aquaculture industry with the intent of moving towards facilitating growth through assistance with permitting to the extent that is environmentally responsible.
2. Explore the potential for an aquaculture park at the Redwood Dock site or elsewhere on Humboldt Bay that meets criteria for infrastructure with regard to water, waste water disposal, and energy availability.
3. The Harbor District should continue to help with regional fisheries management issues (MLPAI, PFMC, ITQs) with the ultimate objective of facilitating regional nearshore fisheries co-management, which would insure sustainability at the same time as maintaining or expanding sport and commercial fisheries.
4. The Harbor District should continue to support efforts to create an artificial reef off the mouth of Humboldt Bay in cooperation with local salt water angling groups.
5. The Harbor District should convene a Brownfield Working Group to deal holistically with blighted industrial lands on the shores of Humboldt Bay to facilitate pollution control and economic development.
6. Brownfield remediation that takes place on lands that have little prospect for further near term industrial use could be used in a mitigation bank to help justify and offset any impacts of reactivation at other industrial sites around Humboldt Bay.

